Chapter 7

PREPARATION AND TRAINING

Summary

Basic training for emergencies may be promoted and expanded through existing accident prevention, safety, and first aid programs of public, business and voluntary organizations. Planning and preparation for the larger problems of natural and wartime disasters is probably not feasible on a mass scale because of political and motivation problems. One alternative would be to develop a highly organized network of emergency measures groups, embracing existing emergency, service, health and welfare agencies Integration of the latter would require special attention to problems of group identity, authority, and division of responsibility and labour. In general, personnel should be selected for the qualities of competence, responsibility, cooperation, stress tolerance, social status, and leadership. The three main bases for selection are the individual's history,, psychological tests, and selection by training. Recruitment of individuals and groups from public service and business organizations and of citizens with special skills may be carried out through public appeals, by appealing through the individual's organization, or by direct personal appeals. Whatever the method, recruiting will be more successful if the appeal comes from persons with social status and credibility, if there are material and social inducements, and if there are compensations for lost of time, money, and other cost factors. The two main problems in training are maintaining recruits' participation and providing optimum conditions for learning. The appropriate use of social and material incentives and provision of compensation for cost will usually handle problems of motivation. Three principles are important in promoting learning: appropriate reinforcement for correct and incorrect responses, orderly presentation of information and tasks, and practice. Organization is essential in emergency operations and this hinges on coordination of services and personnel,, the allocation of authority and responsibility, and on communication. Operational plans and procedures should be worked out in detail, made known to all relevant personnel, and rehearsed. An overall plan for meeting emergencies includes prevention, preparation, and training, and the adequacy of these in turn rests on the supporting organizations.

Need for Training

The risk of injury or accidental death is fairly high in our mobile and mechanized society. Over 10,000 Canadians died in accidents in 1964, and another 139,000 suffered minor to permanently disabling injuries in motor vehicle accidents alone. Each accident constituted an emergency for one or more persons, usually including family members. The majority of the accident emergencies could have been prevented or at least reduced in severity, if people had heeded warnings and taken appropriate protective measures. As for disaster emergencies of fire, flood, wind and nuclear explosions, most people are even less well prepared. Yet if these occur, and a community is not prepared, they may produce widespread destruction of life and property. Why does man not prepare for emergency situations? Under what conditions would he prepare and train for emergencies? What are the main psychological considerations in the development of an emergency measures policy, in the selection, recruiting and training of personnel, in building an emergency measures organization, and in preventing emergencies?

Policy Considerations

Emergencies may be grouped in three catagories: accident emergencies, natural disasters, and nuclear disasters. While the impact of accident emergencies may be devastating to an individual or family, the repercussions on the community or society are relatively minor. Accidents are scattered through society and over time, and they produce little or no disruption of the social system. On the other hand, the total cost of accidents in terms of lives, injuries, and damage, adds up to frightening figures every year and comes to more than the cost of natural disasters and wars over the years. Thus accident emergencies are a major "cost" problem in our society. Because accidents are so frequent, they are more relevant to the experience and concerns of most people than are natural or nuclear disasters. Because of this, it should be easier to arouse interest and motivation for programs of prevention and preparation. Moreover, basic training for accidents emergencies would be most useful in the event of natural or nuclear disasters. This line of reasoning leads to the conclusion that the best policy would be to involve the whole population in training for accident emergencies. Is such a policy feasible, and what are its implications?

Again it is important to maintain the distinction between accident emergencies on the one hand and natural and nuclear disasters on the other. It may not be too difficult to develop: an inclusive program of training for accident emergencies—or to use a positive phrase, of training for *public safety*. Presumably most schools give some instruction now in accident prevention, and some are offering driver training courses; other institutions like the YMCA and Red Cross provide training in water safety behaviour; training in first-aid is offered by a number of groups and institutions like the St. John Ambulance, Red Cross and others; and many companies have specialized accident prevention programs. Although somewhat limited in the kind and extent of the instruction they offer and in the population they cover, these programs could provide a starting point for broader kinds of emergency measures preparation and training. Emergency measures organizations could offer their resources of personnel, facilities and equipment to any group which has first-aid and accident prevention programs—to the YMCA, to schools, to industry, and so on. Appropriately planned and presented, such assistance might also be offered on a munici-

pal or provincial basis through school boards, departments of education, or company headquarters. The emphasis should be on accident emergencies, natural disasters, and public safety. It would be essential to shape the approach according to the experience, interests, and sensibilities of the particular audience.

Such a program of public safety, concentrated on accident emergencies, could make significant contributions to the overall objectives of emergency measures planning. Using the right personnel and imaginative methods, the public image of emergency measures organizations would be enhanced. More people would be given the basic skills for dealing with emergencies of any kind. And a potential source of personnel for emergency measures organizations would be built up.

While a general program of training for accident emergencies would be very fruitful, it would not provide for some of the major problems in dealing with natural and wartime disasters. The latter require highly specialized communications, health, welfare and other personnel; and they call for detailed planning and organization. What are the requirements and possibilities on this level?

One view is that most of the population should be involved in preparation and training for large-scale disasters. Is this feasible and what are its implications?

It is quite clear this is not practical on a voluntary basis. Many people are not sufficiently interested or motivated to prepare for disasters. For one thing, disasters are relatively infrequent and scattered in the lifetime of a society. Even in areas of the United States that are susceptible to tornadoes, it is very seldom that disaster strikes a community more than one in a generation. Because such emergencies are relatively infrequent, the largest part of the population has had no sensitizing experience which might have evoked an interest in preventive measures. Indeed most people are probably adapted to the potential dangers of disaster by a kind of remote-miss experience which is perpetuated by the mass media of communication. Newspaper, T.V., and radio tend to bombard the public with verbal and pictorial accounts of accidents and other emergencies. The great majority of the audience, not personally involved in these events, tends to develop an attitude of indifference and even feelings of invulnerability. This is not to say that this is all bad; it is probably well not to be too sensitized to potential hazards. However, there is little evidence that a more realistic solution, namely of being sufficiently sensitized to take preventive measures, is promoted by the daily fare to which we are subjected.

Another aspect of people's lack of interest in preventive measures is the sheer improbability of disaster in a given person's life time. This being so, it is not reasonable to spend time and effort preparing for something that may never happen. Transport, communications, and other businesses do not provide for highly improbable peak loads. Even those people who have gone through a disaster, though they be sensitized by the experience, are likely to think that it will never happen again to them. Man tends to learn by and live in terms of the probable, and the evidence that a disaster may strike this or that community is not very convincing.

Cost factors are also important in deterring people from preparing and training for emergency situations. Preparation and training take time and effort, and may even involve some outlay of money. Moreover, there are the negative factors of the reactions of a man's neighbours and friends; they may think he is afraid, foolish, or has ulterior motives of getting position and influence. Many people are not averse to expressing such attitudes, and at the very least are unlikely to offer supporting gestures. In addition to direct costs, involvement in a program of preparation for emergency will usually entail some sacrifice in terms of the individual's other interests, activities and involvements. In so far as these are usually frequent rewarding engagements, it is difficult for emergency training to compete with them. Again, a person's priorities will tend to be determined by his past experience of the differential frequency and reward value which different commitments and activities provide.

Finally, there is considerable evidence that many people react to the possibility or mention of a great catastrophe with feelings of helplessness, apathy and inertia. They feel they can do nothing about it anyway so "what's the use?"—of thinking about it, or of trying. The result is a kind of fatalism. They ignore the possibility and consideration of what they could do about it, and so avoid the vague anxieties which would be aroused. There are no studies on the prevalence of this attitude in Canada. However, we can be sure it exists and keeps some people from facing up to the possibility of disaster and taking protective measures.

These deterrents to preparation for emergencies like nuclear war can be countered to some extent, using the methods to be mentioned later in connection with recruitment and training. However, to deal with these deterrents in the whole population, on a voluntary basis, would be a formidable undertaking.

One way to implement large-scale training for disasters and by-pass the above motivation problems would be to make such a program compulsory by law. This is the solution adopted in some European countries and in the Soviet Union. For instance, in Sweden civil defence training is compulsory between the ages of 16 and 65 unless the individual is in the Armed Forces. When 16 years old, each youth is enrolled and given 60 hours of civil defence training the first year, followed by 20 hours in the second and third year and periodic refresher courses thereafter. In the Soviet Union such training is compulsory between the ages of 16 and 60 for men and between 18 and 58 for women (Gouré, 1962).

However, the compulsory solution may not be politically feasible in Canada. Although we are willing to support compulsory academic education, compulsory training for emergencies would be anathema to many because of its possible association with military conscription. It might be viewed as some violation of freedom—although this does not seem to be a problem in democratic Sweden. Another possible argument is that compulsory training would contribute to the general commitment to conflict and war. This would not seem too valid in view of the purely defensive nature of training for emergencies on our home ground. Moreover, it is unlikely that a compulsory emergency measures program in a country of Canada's size would upset the "balance of terror" which apparently obtains today—at least not more than the compulsory programs in some European countries. Any tendency in this direction could be more than countered by the country's open and dedicated commitment to prevention of wars.

Another consideration with respect to a massive program of preparation for disasters is that of maintaining a constant state of readiness. A few authors such as Sinha (1954) suggest that it would be difficult to live in a constant state of readiness for crises. The implication is that living in a constant state of high arousal and vigilance would detract from everyday efficiency and would possibly promote the development of emotional problems. This view stems from a misunderstanding of what readiness means. To be prepared and ready for emergencies simply means that the individual has learned to discriminate among various warnings signs and between warning signs and indications of reassurance, and that he has acquired and has available the appropriate responses. He will not be in a continual state of arousal and vigilance, because the alerting stimuli are not constantly present. However, when certain warnings signals do occur, these will produce the appropriate vigilance and ready him for action. To illustrate, the trained boxer is not in a constant state of readiness to fight, but he may become ready very quickly by virtue of the build-up during preliminary training and when he steps into the ring. Likewise, members of the Armed Forces are prepared and trained for various dangers and emergencies, but they are not in a state of high arousal, tension, and vigilance all of the time. Their training has sensitized them appropriately to the danger signals with which they must deal and has provided them with the emotional resistance and coping behaviours which will enable them to behave effectively in battle. They are prepared for battle, but they do not live in a constant state of readiness for battle.

The only sense in which maintaining a constant state of readiness may be a psychological problem is that in which people are continually bombarded with warning signs, but have no available plans and coping behaviours. This may be the situation when the population is exposed daily to information about the possibility of war and the dangers of nuclear weapons, but are given no constructive information and no real opportunity to prepare themselves. This would probably be detrimental, either because it produces adaptation to the information or because apathy and emotional resistance to participation in training programs are built up. However, it is unlikely that any training program would utilize such methods; rather the focus would be on developing people's emotional resistance, discriminations, and coping behaviour. Thereafter, they would be less vulnerable to indiscriminate warnings, and would suffer less anxiety because they are ready with some coping behaviours.

A compulsory program of training for large-scale emergencies would imply that it is important to have close to 100 per cent participation. This may be desirable for the emergencies of every day life, but it is not at all clear that it is necessary or even desirable for disasters and nuclear emergencies. For one thing, it may be difficult to justify on economic grounds. Moreover, a community's response to major disaster may be just as good if about 10 per cent of the population has had appropriate training, especially if that 10 per cent includes the right people in terms of their skills, roles, leadership and organizational abilities. It should be emphasized that this is an estimate; investigations might reveal that the figure should be somewhat higher, or even lower. Thus, maintaining a clear distinction between training for public safety in terms of every day emergencies on the one hand and preparation and training for disasters and nuclear emergencies on the other, the latter may require only a percentage participation by the population to be adequately effective.

For the time being, it is probably best to assume that compulsory training for disasters is not feasible in Canada, and that such widespread preparation and training *may* not be necessary in any case. The alternative is to develop a network of highly organized groups of emergency measures personnel, with appropriate facilities and equipment, and with detailed and rehearsed plans for dealing with natural and wartime disasters. The size of such groups is a matter for investigation. Their composition will depend on the kind of disasters and problems for which they are designed. However, assuming that they should be prepared to deal with natural disasters due to things like fire, flood and earthquake, and with nuclear emergencies, we can say that they should include civic officials, medical and paramedical personnel and facilities, communication and transport personnel and facilities, control personnel like police, firemen, and armed forces, welfare and relief personnel, public utility and service personnel, and other specialized groups like office clerks, undertakers, and so on. The problems then are selection and recruitment of the appropriate personnel, training, and their integration into an organization that will be viable and effective in a range of emergency situations. The psychological aspects of these problems are discussed further, below.

Selection of Personnel

Having decided what kind of an organization we want for large-scale emergencies, the next step is to set down the kind of personnel that are required. The details of this will vary according to local circumstances, but keeping in mind the main objectives and functions of emergency organizations, we can specify the general requirements which personnel should meet.

(1) Competence – Personnel should be selected on the basis of their competence for the particular job in question, competence in terms of technical skills, medical skills, organizational ability, ability to deal with psychological disturbances, and so on.

(2) Responsibility – There is no point in selecting and recruiting personnel who are not responsible. They should be conscientious, reliable, and exhibit role stability–that is, they should be imbued with the value and importance of their role, whether as a firemen or a physician, and it should be a high priority and pervasive way of life for them. This is to say that the role they fill in the organization should be something incidental, which would probably be forsaken in a crisis.

(3) Co-operation – Personnel should have the ability to work with others in a coordinated and constructive manner.

(4) Stress tolerance – It is important that personnel for emergency measures organizations be able to stand up to stress without undue emotional disturbance.

(5) Social status – At least the proportion of personnel who will be most visible as members of the organization should have respect and some social status in the community. This will contribute to the image, authority, and credibility of the organization in its various activities and especially in emergency situations.

(6) Leadership qualities – Selected leadership qualities of the kind detailed in Chapter 4 would be essential in the leaders of emergency organizations. It would also be important to have some of those qualities in most of the personnel so that they could provide leadership and direction to other people in a disaster situation. It is neither necessary nor practical to aim for all leadership qualities in

every man, but selected ones should be requirements for personnel according to their place and role in the organization.

It goes without saying that the above requirements for personnel will also constitute objectives of training within emergency organizations. However, some of them depend on a long history of experience and training, and others, like social status, are attributes developed in society at large. Thus it helps a great deal if one starts with individuals who already have the qualities to a considerable degree.

There are three main ways to select personnel according to pre-determined criteria: the individual's history, psychological tests, and selection by training. One of the best ways to predict how an individual will perform in a given situation is to look at his past performance in similar situations. For example, if we are looking for medical skills for special kinds of problems, we shall select a man with medical training and demonstrated experience in that area. Likewise we shall look for individuals with training, experience and demonstrated competence in organizing activities and in working with others; individuals who have demonstrated resistance to stress; and individuals who have status and social influence with their fellow citizens. Interviews, letters of reference, and interviews with persons who know the candidate are the main methods of getting the requisite information. It is essential to know what qualities and behaviours are desirable and undesirable, and the kinds of situations which are relevant. These should be probed, whether in interviews or letters of reference.

Psychological tests may make a significant contribution in the selection of personnel for an organization. They are not a sufficient criterion in themselves but are especially useful for getting behind a superficial show of knowledge and ability, for getting beneath the smooth exterior which some people exhibit, for determining a man's personality organization and control, for getting at qualities like assertiveness and compliance (North, 1950), and for determining a person's interests. Appropriately used by competent personnel, and with due regard to base rate phenomena, tests can make a contribution not only to selection but to placement of personnel within an organization.

Selection of personnel on the basis of their performance in training is a reliable means of getting the right people, especially if the training includes demanding exercises and realistic situations. This method is particularly useful in showing up weaknesses, lack of competence, and lack of the appropriate leadership qualities. It has the advantage that the individual may himself realize his inadequacies and either seek out further training or be amenable to another placement. Shelter living exercises, as brief as two days, under realistic conditions and with simulated problems. have made individuals aware that they were not suited for certain leadership roles. However, there are two limitations with the selection by training method: It is a second-order method in so far as individuals must be in the organization already; if they don't have the requirement, it may be necessary to release them or at least place them in another position. Second, the method may not point to those individuals who *have* the important qualities--because they have not had an opportunity to demonstrate them. Thus it is important with this method to provide adequate opportunities for individuals to test their ability in a variety of realistic situations and exercises. In general, the most successful selection program will utilize all three of the selection procedures; history, tests, and selection in training.

There is one problem of selection with which emergency organizations can do little directly. It is that of the personnel who make up emergency and service organizations like the police, firemen, Red Cross, and so on. It is essential to have such groups integrated into the overall emergency measures program. However, they will have their own requirements for personnel and their own selection procedures. On the other hand, most of them will be doing an adequate job in this regard, on the basis of their own history and experience. It might be useful to exchange personnel selection information between organizations, with a view to promoting understanding of different frames of reference and developing better and coordinated selection methods.

Recruitment

An overall emergency organization must draw on the resources of those emergency and service agencies which are already established to handle various aspects of emergency situations. These include such people and groups as civic officials, the police, firemen, health and welfare departments, hospitals, voluntary emergency agencies like the Red Cross, St. John Ambulance, and so on. In most cases it would be wise to recruit such organizations as a whole. Generally speaking, this should be not too difficult, especially if the request is sponsored by government at the national, provincial or municipal level. Moreover, these agencies exist in large part to deal with emergencies, so that the objectives of an overall organization should be relevant to their own interests. However, recruitment of the active collaboration of such agencies is almost certain to present difficulties. For one thing, our present service and emergency agencies tend to be jealous of their identity and status in society. They will be apprehensive about losing these in any merger with an overall organization. They will be uneasy about the possibility of giving up those functions with which they have had experience and are familiar, and on which they have built their role and image in society. Having a tradition of experience and success, they may well question the competence and ability of a new overall directorate to manage emergency operations. Second, most of these agencies are primarily concerned with accident and other social emergencies, and at most with natural disasters, and many of their members are not concerned with nuclear disasters. Thus one of the main objectives of an overall organization, that of preparation and training for nuclear emergencies, may not be relevant to the interests of such agencies. Moreover, these agencies are preoccupied and busy with their day-to-day objectives and functions and may have little time and energy to devote to the larger plan. Third, while the collaboration of an agency may be recruited on the official level, getting the active cooperation of agency members may be another matter. The main problems here will be relevance to the interests and concerns of such individuals, motivational deterrents like those mentioned earlier, and cost factors of time, inconvenience, and so on. These problems may be especially evident in agencies that are largely made up of volunteers.

Recruitment of selected individuals and groups from public service and companies like those responsible for power and communication services will also present difficulties. Such companies have accident prevention and other emergency measures training programs which would stand them in good stead in the event of a natural or nuclear disaster, but these programs are seldom integrated with an overall plan or organization. Getting the company's official cooperation for overall planning and preparation may not be too difficult, but this will not ensure active cooperation either on the organization or individual level. At both levels one is dealing with individual persons who must be convinced of the importance of the endeavour and they must be motivated with the appropriate social and material incentives. Participation would involve cost factors to the company and the individual, time, effort, material and social, and these must be countered with appropriate compensations.

The other general source of desirable recruits for emergency organizations would be citizens with special skills and qualities, like physicians, nurses, pharmacists, scientists, technicians, and so on. Generally speaking, such people must be procurred on a voluntary basis, and this will not always be easy. One would think that some, like physicians, would be interested because of their training for and commitment to emergency services. However, it must be recognized that social, large-scale and nuclear emergencies are not really very relevant to them. The physician's primary concern and constant preoccupation is with individual patients. He is usually over-committed in terms of patient load. He is generally not too interested in the organizational problems of emergency work. As a result, he may not be very responsive to general appeals to participate in training and preparation for natural and nuclear disasters. A general appeal through his professional organization is not likely to be more successful. Those physicians who work full time in hospitals, public health personnel, and other potential recruits that have an employer, may be more responsive if their employer backs the program and provides the appropriate sanctions and inducements. In general, however, the desired volunteer recruits will not be easy to come by.

It is quite clear that recruiting the active collaboration of agencies, groups, and individuals for an emergency measures organization is not a simple matter. In the end, one is dealing with individual persons with their own interests, preoccupations, concerns, and commitments. Even when they are recruited on a compulsory basis, they may give little to and even detract from the overall program. Officials in the Soviet Union have had considerable difficulty in this regard with their compulsory civil defence training program. The problems are essentially motivational and we will now discuss three methods for dealing with these.

Public Appeals. The method of public appeals is a common means of recruiting people's interest and participation in various activities. The communication mass media are such that most people can be reached, and reached repeatedly. The main difficulty is that people tend to build up a kind of resistance to communication from the mass media, viewing them with some skepticism and detachment. They get such a variety of "facts" and opinions from these sources that their credibility is not very high. However, if such communications utilize the principles of relevance, people's need to identify with some group or movement, and the credibility and drawing power of status informants, they will have a fair degree of success.

The first means of increasing the effectiveness of public appeals is to spell out the relevance of preparation and training for emergencies to people's experience of accidents and illness. Moreover, the gains from developing adequate coping behaviours should be made explicit and dramatic. This would undoubtedly attract the interest of some people, but it would be unwise to expect large numbers to respond. For one thing, it is difficult to impress people with the relevance of natural and nuclear disasters because they are infrequent, a probability that does not seem serious at the moment. Even persons who have experienced an accident emergency tend to think that it will not happen to them again. Moreover, people are inclined to put unpleasant experiences and possibilities out of mind, to suppress thoughts of them, and to evade issues that raise such possibilities or memories.

The second means for increasing the impact of public appeals is to appeal to people's identification with the community, their country, and "good causes". This nearly always attracts some people. However, the method must be used with caution because it may attract social climbers, persons who are looking for ways to overcome lack of self-confidence, and individuals who are looking for influence and power. While some such individuals may be integrated into an emergency organization, they may not have the specific skills, roles, and personal qualities which are desired. Moreover, their presence in the organization may detract from the positive image which the organization must build.

The third tactic for increasing the force of public appeals is to associate them with individuals in the community who have status and credibility, and if possible have the appeals made by such individuals in person. This method will catch the interest of some people, but again caution is indicated because of the kind of people who may come forward. The appeal is essentially based on their motivation and will not be selective in terms of skills, stress tolerance, and other qualities required in recruits.

The principe of appealing to people in terms of the material and social incentives and opportunities which participation in an organization offers will also evoke a response in some people. The difficulty with this method is that it may attract individuals who for some reason or other have not been able to develop and take advantage of such opportunities in society at large. Thus some of those who respond may have personal limitations. It may well be possible to overcome such limitations in training, but there are advantages in starting with people who have the desired qualities.

In general, public appeals for recruiting specialized personnel for an organization are often disappointing. Moreover, they tend to bypass the selection stage. The latter limitation can be overcome by applying selection procedures to those volunteers who come forward. However, if some have to be rejected for one reason or another, they may detract from public goodwill for the organization. Rejection of status seekers may be particularly damaging in this regard.

Appeals through Organizations. The second method of recruiting personnel is that of appealing to them through their employer organization. The first step here is to convince management of the relevance of the emergency program to their own social and material objectives. If the emergency organization carries the official sanction of governments, this will constitute a persuasive introduction to management. However, it will still be necessary to carry the argument to them in one-to-one and small group discussions. The social status, credibility, and skills of the emergency organization proponents will be crucial. It may also be necessary to offer concrete inducements and compensations to the company, such as pay for equipment and facilities, for time off of employees, and so on. It will then be up to management officials to suggest particular individuals and eventually to approach them with the proposition. Here again the approach should be on a one-to-one or small group basis, with emphasis on the relevance of training for emergencies, and with the offer of concrete social and material incentives like those to be mentioned later. Appropriately carried out, recruitment through organizations and companies may be very effective, and it also provides an opportunity to select personnel on the spot.

Direct Personal Appeals. The third method for recruiting personnel is that of a direct approach to selected individuals in a one-to-one or small group setting. This method has the advantage that recruiting can be selective from the beginning, directed to the few individuals in each section of the community who have the desired skills and personal qualities. Information should be offered in such a way that it is relevant to the receiver's past experience and to his concerns about his self-image and about the welfare of his family. There should be an opportunity for questions and discussions, that disturbing elements may be absorbed. Emphasis should be placed on the opportunities for developing coping behaviours and on the social and material incentives which will be provided. Carried out by individuals with the appropriate skills, social status, and credibility, this is probably the most powerful method of appealing to potential recruits.

Janis (1951) reported an investigation which illustrates how this approach may work. Twenty-nine men and women of various educational and occupational backgrounds were given intensive interviews in the summer of 1950 in order to determine the kinds of attitudes and reactions that they had to information about the atomic bomb. In general the respondents expressed moderate but superficial approval of civil defence preparations in the United States. They took a rather detached and complacent view of the threat, apparently believing that the danger of bombing attacks was remote, and that if there was any real danger the government would see that the population was protected. Even those who admitted the possibility of bombing attacks on the country held the threat at arms length by believing that it would not happen for at least a number of years. As one middle-class housewife said,

> I haven't been thinking at all about the possibility of war or anything like that because it is such a long ways off—about 15 years or so from now. I believe that Russia has so much to do in order to prepare for war that they won't start anything and I don't think the United States is planning to.[1]

However, it was found that such optimistic attitudes were rather thin in most cases and represented a kind of front or conventional way of handling the threat and of ignoring it. When the interviewers tested the strength of respondents' beliefs by giving them concrete information about the magnitude of danger posed by the atomic bomb, many of them changed their responses from disapproval of civil defence preparations to spontaneous approval. For instance, when respondents were told that thousands of injured required but could not get immediate medical treatment after the bomb on Hiroshima, that fires killed many people, and that tens of thousands suffered from lack of food and shelter, a school teacher said:

> Oh, well, in that case I would be completely in favour of a civil defence organization. I would feel that we ought to get going on it right away if it really could make that much difference. I really haven't read much about atom bomb casualties and I didn't realize so many could be

[1] From *Air war and emotional stress*, by I.L. Janis, The Rand Corporation. New York: McGraw-Hill Book Co., 1951. p. 235. Used by permission.

saved....my conception of it was that there isn't very much that could be done to alter a person's chances of surviving, once an atom bomb is dropped...[2]

While a positive and constructive response was made by many of the respondents, some reacted to the concrete information with an obvious rise in anxiety and recommended isolationism, while others responded with veiled aggression and proposed preventive war. One respondent said, "I am really afraid about that. Probably the only thing we can do is to hit them first, hit them real hard....We might be able to knock them out first". (Janis, 1951, p.239) Another recommended a different solution:

> We should stay out of the war. It was a mistake for us to go into Korea. We should give up the idea of trying to make money on other countries. People like MacArthur shouldn't be permitted to run this country. We should sit back and give up our interests in other countries; in that way we can stay out of war. Also, we have too many foreigners in this country. We have been too lenient with people coming here and should crack down on that...[3]

It will be evident that the above procedure has a powerful effect in arousing people. Indeed, it could boomerang if it evokes attitudes supporting drastic actions like adoption of preventive war, extreme isolationism, curbs against foreigners, and further stereotyping of other people. However, it should be possible to control and minimize such extreme reactions. The study reported by Janis was an investigation and was not designed to determine how people could be interested in appropriate preparation and training measures. It is not clear that the interviewers were known to the respondents, and viewed as respectable and credible informants. Moreover, the interviewers started with the nuclear threat, at the top of any fear hierarchy, rather than a lower level in terms of emergencies of every life, or natural disasters. Finally, they did not adapt their questions and information to each individual's past experience, present circumstances, and concerns. Appropriately planned and carried out, the risks with this method would probably be minimal. Nevertheless, it would be essential to pre-test the method thoroughly, and it undoubtedly would require much skill in the application.

It is noteworthy that the above method for interesting people in preparation for emergencies is much like the emotional inoculation procedure which Janis (1958) found so effective with a proportion of people who were about to undergo major surgery. Before the operation, these people were calm, indifferent, and undisturbed about the operation and its possible consequences; they seemed unaware of the possible disastrous consequences. After surgery, they tended to respond to the pain and other stresses and inconveniences in the post-operative treatment and confinement period with angry resentment, anxiety and depression. However, when they were prepared for the operation with an "emotional inoculation" in the form of an individual interview in which they were given realistic information and impressive warnings about what they would suffer and the related consequences, their negative post-operative reactions were markedly reduced.

The import of the two studies by Janis is that a proportion of people may be motivated to prepare for emergencies and inoculated against extreme psychological reactions in one process. It should be noted, however, that the method may be effective with that proportion of the population which tends to be calm and rather indifferent to the possibility and projected consequences of emergencies. Janis found that emotional inoculation did not work on individuals who were already anxious and disturbed in anticipation of the operation, and apparently a proportion of the respondents in his motivation study were also highly reactive to threatening information, On the other hand, investigations might reveal that group methods or systematic desentization (Wolpe, 1958) would also be effective with reactive or sensitized individuals.

Whichever of the three methods is used to recruit personnel, it is important to arouse positive motivation by offering incentives and to counter negative motivation by reducing cost factors. It is a fact of

[2] ibid, p. 242.
[3] ibid, p. 240.

human nature that man tends to judge the attractiveness and value of opportunities, commitments, and actions in terms of their material and social consequences. If a commitment has high cost in terms of taking the time that a man would normally devote to his work, his family, his associations, and to leisurely pursuits, without adequate material, social and prestige compensations, he is unlikely to accept it. If it also costs him money, and entails inconvenience and special effort, it is not difficult to predict his choice. Even without reference to cost factors, human behaviour in a given endeavour can only be maintained with appropriate incentives and reinforcements. The long and the short of this is that it is necessary to reduce cost factors on the one hand and to offer positive reinforcements on the other.

The kind of compensation and reinforcement which will work will tend to vary from person, but the following are some of the more common possibilities. Adequate payment for time is an obvious and powerful inducement and this applies more than ever to the skilled technician and the professional man because of the current competition for their services. On the whole, one gets what one pays for and this is just one of the costs of having an effective organization. Other inducements that may be offered include the opportunity to learn saleable skills, paid trips to training conferences and to the sites of disasters, and provision for time off from one's job.

In addition to material inducements, social incentives and opportunities are persuasive sources of motivation: attention and recognition, social privileges and opportunities, influence, prestige and power, and the feeling of identification with a group or cause. One of the difficulties here is that the recognition which people value most is usually that which comes from their already well established reference groups, like their family, their professional organization, their peer group in the company or business for which they work, their religious group, or the associations of which they are members. Special measures would be required to complete with these sources of social reinforcement, such as recognition by high status members of the community, the cultivation of loyalty and morale in small group units, and, when appropriate, recognition on the community or even on the national level. It would be especially important to use publicity when an individual or task force has contributed to the handling of a real emergency. This would have the added advantage of enhancing the image of emergency units and personnel in the eyes of the public. Opportunities should also be cultivated for providing the informal satisfactions associated with "social" activities. However, these should be promoted judiciously because they can be artificial and strained if they are forced or developed prematurely.

Training

There are two main problems in any training program: First, it is essential to maintain trainees' participation, that is, to motivate them to keep coming to training sessions and taking an active part in the learning and practice processes. Second, there is the problem of how to maximize learning.

Maintaining Participation. The first problem, of maintaining participation, is largely a matter of the motivation and cost factors mentioned in the section on *Recruitment.* Motivation and interest are aroused by the offer and promise of incentives and opportunities. If we then make such incentives and opportunities contingent on certain kinds of behaviour, like arriving on time, doing lessons, practicing a task, and so on, we reinforce these behaviours and maintain them at a high level. Thus dealing with motivation in a way to maintain the desired behaviour is accomplished by offering and administering incentives and opportunities in the appropriate manner—by applying the principle of reinforcement.

The sorts of incentives and opportunities for which people work, play, and learn vary from individual to individual, so that it is important to get to know individuals who make up an organization. Sometimes we are not too aware of the inducements which are important to us as individuals, or at least we may deny that we do certain things for money, recognition, and social prestige. However, we can test the validity of the reinforcement principle by asking how long we, or the physician or policemen, would conti-